

TITLE

APPARATUS AND METHOD FOR INTERFERING WITH PATHOLOGICAL  
CELLS SURVIVAL PROCESSES

ABSTRACT

5           A method and an apparatus for interfering with  
pathological cells survival processes, i.e. inducing  
directly or indirectly apoptosis, on living pathological  
cells, by using magnetic fields without adversely affecting  
normal cells. Static (S) and extremely low frequency (ELF)  
10 magnetic fields are used having low intensity comprised  
between 1 and 100 mT, preferably comprised between 1 and 30  
mT. In particular SELF fields are used which are different  
sequences of S and/or ELF fields, i.e. S fields followed by  
ELF fields, ELF fields followed by S fields, S and ELF field  
15 together, as well as the presence of S or ELF fields alone,  
said ELF fields having a field frequency comprised between 1  
and 1000 Hz. An apparatus for carrying out the method  
comprises means for generating static magnetic (S) fields  
crossing a working environment and/or means for generating  
20 electromagnetic extremely low frequency (ELF) fields over  
the working environment in addition to the S fields. Means  
are provided for modulating the S fields associated to the S  
fields generating means and varying the intensity of the S  
fields from 1 to 100 mT, preferably between 1 to 30 mT  
25 according to a predetermined function. Means may also be  
provided for modulating the ELF fields associated to the ELF  
fields generating means and imposing to the ELF fields a  
frequency between 1 and 1000 Hz with intensity comprised  
between 1 to 100 mT, preferably between 1 and 30 mT  
30 according to a predetermined function.

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